**Amendment to the Background**

Please replace the paragraph beginning at page 4, line 5 with the following rewritten paragraph:

In general, there are difficulties with the latter multi-spectral approach particularly associated with lattice-constant constraint and current matching. In the latter regard, the output current of the multijunction solar cells is limited to the smallest of the currents produced by any of the individual ~~junction~~ junctions. For this reason all junctions in the monolithic device must be designed to produce the same amount of photo current.

**Amendments to the Specification**

Please replace the paragraph beginning at page 9, line 24 with the following rewritten paragraph:

Referring to Fig. 4, a point contact solar cell is schematically portrayed in general at 26. Cell 26 is fabricated in a silicon die ~~10~~ 28 with two opposing major surfaces with the surface area being on the order of $4mm^2$. The die ~~10~~ 28 is an intrinsic monocrystalline silicon chip. A pattern of p+ doped regions 30 and n+ doped regions 32 are formed in one surface in a repetitive pattern of interleaved rows. The p+ rows and the n+ rows are interconnected to form the contacts for the solar cell. A repetitive pattern is derived for the diffused regions, with each pattern or cell separated from adjacent cells by streets or space for eventual sawing of the substrate and forming of individual dies. Prior to the cell fabrication in the substrate, dopant is diffused through the substrate 28 in the channels, thereby forming passivation regions as represented at 34. See generally U. S. Patent No. 6,333,457 (supra).

Please replace the paragraph beginning at page 10, line 21 with the following rewritten paragraph:

Now looking to the aspects of heat generation by the multijunction cell arrays, it may be observed that the sun may be considered to be a black body radiating at about 5800° Kelvin (at earth). In general, radiation may be considered in terms of energy per wavelength, following the Planck curve of emission of light. Looking to Fig. 6, such a Planck curve is schematically represented at 60. In general, the curve 60 relates electrical energy to wavelength energy following Planck's formula which may be represented as follows:

$$E = \bar{h} / \lambda$$

where $\bar{h}$ is Planck's constant divided by $2\pi$. In general, the ordinate of curve 60 may be represented as energy per wavelength or watts/($m^2$ x nm) and the abscissa represents wavelength in nanometers. In general, Planck's formula represents that, as wavelengths become smaller, the energy in the associated photons grows greater. However, bandgap energy remains constant. It may be further observed that the circuit associated with a given photovoltaic cell can absorb bandgap energy. For silicon devices, that bandgap energy (BGE) is present at the

1100 nanometers as represented by vertical dashed line 62 in the figure. Accordingly, for such devices, the energy represented at longer wavelengths and illustrated in crosshatched fashion at 64 is too weak and is manifested within the photovoltaic device as heat.

Please replace the paragraph beginning at page 11, line 6 with the following two rewritten paragraphs:

On the other hand, as the wavelength shortens, photon energy increases and photons which may be absorbed in the depletion layer to contribute to electrical production will fall below internal dashed curve 66. Note that curve 66 somewhat peaks at one-half the value of wavelength representing bandgap energy at dashed line 62. This halfway point is represented at vertical dashed line 68 which extends from 550 nanometers wavelength. ~~Halting~~ Halving that wavelength again results in a 275 nanometer wavelength represented at vertical dashed line 70. As is apparent, between vertical dashed lines 68 and 70 very little useful energy is available for the generation of electrical output, photons, in effect, being transmitted through the photovoltic device to create heat. Hatched areas 74, 76 and 78 reveal very little effective depletion layer generated energy. In accordance with the method of the invention, the wavelengths between bandgap energy line 62 and about one-half of the associated wavelength at line 68 is considered a band of useful wavelengths. In this regard, while that region contains non-usable photon energies as represented at hatched region 72, by restricting operation of the photocell in effect between lines 62 and 68, a substantial amount of heat generation energy is avoided. In effect, a "spectral cooling" can be achieved. The method of the invention will be seen to remove components of solar energy at a concentration light path which corresponds with at least a portion of those wavelengths substantially ineffective to evoke cell electrical output. With the arrangement, greater concentration of sun radiation may be employed in the generation of electrical energy by virtue of this spectral cooling approach.

A variety of approaches can be utilized for the removal of ineffective solar energy components (ISEC) as represented at cross hatch curve regions 64, 70, 72, 74 and 76. For example, dichroics, either reflective or transmissive may be employed. Additionally, frequency shifting may be carried out with luminescence, phosphorescence or fluorescence. Considering conventional heat sinking

constraints as described above, electricity generation efficiencies can alter from about a conventional 10% of useful energy to about 70% of useful energy.